



# Product Evaluation

WIN2191 | 0317

Engineering Services Program

*The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

*For more information, contact TDI Engineering Services Program at (800) 248-6032.*

**Evaluation ID:** WIN-2191

**Effective Date:** March 1, 2017

**Re-evaluation Date:** January 2021

**Product Name:** Series 3250i / 4250i / 4250i-OS / 4250i-SDH-HP-XLT P.I. Thermal Broken Aluminum Projected-In Hopper Window, Impact Resistant

**Manufacturer:** Wausau Window and Wall Systems  
7800 International Drive  
Wausau, WI 54401  
(715) 846-3474

## General Description:

The Thermal Broken Aluminum Projected-In Hopper Window System is an aluminum frame system used for commercial window wall installations. This evaluation report includes the following Projected-In Hopper window assemblies:

- Individual Projected-In Hopper Windows
- Muller Projected-In Hopper Windows

**Product Identification:** A Wausau Window label will be affixed to the casement window assembly.

**Products Installed in Accordance with Drawing No. W14-47 (Large Missile Impact Level D):** The label includes the manufacturer's name (Wausau, Window and Wall Systems); the product name (Series 3-4250i-HP-XLT P.I. Thermal Broken Aluminum Projected-In Hopper Window); the design pressure; that the product complies with ASTM E330-02, ASTM E1886-05, ASTM E1996-09, Large Missile Impact, Level D; and reference to Drawing # W14-47.

**Limitations:****Design Drawings:**

The Thermal Broken Aluminum Projected-In Hopper window assemblies complying with the requirements for large missile impact must comply and be installed in accordance with the following drawing:

Drawing No. W14-47, titled "Series 3-4250i-HP-XLT Aluminum P.I. Hopper Window L.M.I.", Sheets 1 thru 27 of 27, by Al-Farooq Corp. dated December 10, 2014, signed and sealed by Javad Ahmad., P.E on July 15, 2015. The stated drawings will be referred to as the approved drawings in this evaluation report.

**Fabrication and Assembly:** Wausau Thermal Broken Aluminum Projected-In Hopper Window systems are fabricated and assembled in the factory. The Thermal Broken Aluminum Projected-In Hopper Window systems are glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

**Design pressure (DP):**

- The Thermal Broken Aluminum Projected-In Hopper Window assemblies for large missile impact level D have a design pressure rating of  $\pm 80$  psf. Refer to drawing No. W14-47 sheet 1 thru 11 of 27 for specific design pressure requirements.

**Impact Resistance:**

**Products Installed in Accordance with Drawing No. W14-47:** These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These assemblies have passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996-09. Install these assemblies at any height on the structure that does not exceed the design pressure rating for the assembly. These assemblies do not require an impact protective system when installed in areas where windborne debris protection is required.

**Acceptance of Other Assemblies:**

- Window assemblies with dimensions equal to, or smaller than those specified are acceptable with the limitations specified in this report.

**Installation Instructions:**

**General:** Prepare and install the assembly in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available in the following document, **Drawing No. W14-47**, "Series 3-4250i-HP-XLT Aluminum P.I. Hopper Window L.M.I." Sheets 1 thru 27 of 27, by Al-Farooq Corp. dated December 10, 2014, signed and sealed by Javad Ahmad., P.E on July 15, 2015.

**Installation:**

**Wall Framing Construction:** Mount the Thermal Broken Aluminum Projected-In Hopper Window system to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,000 psi)
- Wood dimension lumber (minimum Southern Yellow Pine SG 0.55)
- Masonry (ASTM C-90-1 1B, Grade N, Type 1 or greater)
- Steel studs (minimum 12 gauge, 36 ksi)
- Steel (minimum 12 gauge, minimum  $F_y = 36$  ksi)
- Aluminum (minimum 1/8" thick, 6063-T5)

Refer to the design drawings for specific wall framing requirements.

**Fastener Requirements:**

- Refer to the approved drawings for the anchor layout and notes.
- Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

**Note:** Keep the manufacturer's installation instructions on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.